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ABSTRACT

The influence of full-time-equivalent college enrollments and the Consumer Price Index on the costs of higher education for North Carolina's comprehensive and liberal arts colleges and universities was assessed. Comprehensive institutions are defined as enrolling more than 1,500 students and offering a liberal arts program and at least one professional program, while liberal arts colleges are defined as those four-year colleges offering liberal arts programs only. The expenditures for the public institutions grew at an average annual rate of 19 percent as compared to a 13 percent average increase for the private schools. Most of this growth was a result of expanding enrollments and inflated dollars. When adjustment was made for increasing enrollment growth by expressing expenditures in student units, the growth rate was 11 percent per annum for the public universities and 10 percent for the private sector. The current expenditures annual growth rate declined .4 percent for the public institutions and .7 percent for the private institutions when adjustments were made for enrollment growth and the decline in the value of the dollar over the decade. At the public institutions, enrollment increased more rapidly and the operating costs per student were lower than was the case at private institutions. (SW)

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TRENDS IN EXPENDITURES FOR NORTH CAROLINA'S COMPREHENSIVE AND LIBERAL ARTS COLLEGES AND UNIVERSITIES

RON TUTTLE

The past decade has seen a steady and substantial increase in gross expenditures for higher education within North Carolina and throughout the nation. In 1971-72 North Carolina's public and private senior colleges and universities had current expenditures of $460 million[1,2] for education, auxiliary enterprises, public service, and teaching hospitals. In 1981-82 these same costs were $1.3 billion,[3] a 178 percent increase over the ten-year period. These gross figures often are used to demonstrate the explosive and uncontrollable growth of higher education costs. Further analysis reveals, however, that the substantial increase in these cost figures can be attributed mainly to two factors -- enrollment growth and the deflated value of the dollar. In North Carolina, the full-time equivalent (FTE) enrollment in the public and private senior colleges and universities grew from 106,011[4] in the fall of 1971 to 141,564[5] in the fall of 1981, a 34 percent increase. During the same time the Consumer Price Index more than doubled, rising from 121.3 in 1971 to 281.5

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[1]Statistical Abstract of Higher Education in North Carolina, 1972-73 (Chapel Hill: UNC General Administration, 1973), pp. 160-161.

[2]Duke University data is not included in this paper because the information was not available. In 1973-74, the last available data, Duke University's current expenditures were $150 million.

[3]Higher Education General Information Survey (HEGIS) reports for 1981 fiscal year.

[4]Statistical Abstract, 1971-72, pp. 14-16.

[5]Statistical Abstract, 1981-82, pp. 18-20.

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in 1981[6]. This study will examine the influence of these two factors on the costs of higher education for the state's comprehensive and liberal arts colleges and universities.

The goals and services required to operate an institution of higher education are diverse and include the costs of the following: instruction (faculty salaries), research, public service, academic support (libraries, audio-visual services, computer facilities, administrative personnel), student services (admissions, registration, health services, financial aid), operation of physical plant and maintenance of grounds, scholarships and fellowships, auxiliary enterprises (residence halls, food services, college stores, intercollegiate athletics), and sometimes teaching hospitals and independent operations such as research and development centers.

Occasionally, current funds must be transferred from the other accounts to fulfill binding legal obligations of the institution. These transactions are known as mandatory transfers. These costs and the ones listed above are referred to as current fund expenditures and mandatory transfers and represent the total costs of operating a college or university.

The higher education enterprise in North Carolina consists of 26 public technical colleges, 23 public community colleges, 38 private colleges and universities, and 16 public senior colleges and universities. The missions and characteristics of these and all institutions vary widely. As a result of this diversity, and in order to facilitate the study of these institutions, the Carnegie Council on Policy Studies in Higher Education[7] devised a

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[6]Bureau of Labor Statistics, CPI Detailed Report (Washington, D.C.: United States Department of Labor, January, 1982).

[7]Carnegie Council on Policy Studies in Higher Education, A Classification of Institutions of Higher Education. Revised Edition (Berkeley, Calif.: Carnegie Foundation for the Advancement of Teaching, 1976).

classification system for post-secondary institutions. The classifications are: research and doctoral-granting universities, comprehensive universities and colleges, liberal arts colleges, and two-year colleges (Appendix A). This study examined the costs of comprehensive and liberal arts colleges only. Comprehensive institutions are defined as enrolling more than 1,500 students and offering a liberal arts program and at least one professional program. Liberal arts colleges are defined as those four-year colleges which offer liberal arts programs only. There are 41 comprehensive and liberal arts schools in North Carolina. Two institutions, Wake Forest University (private) and East Carolina University (public) were omitted from the sample because their budgets include medical schools which disproportionately inflate the expenditure data. The schools included in the study sample are as follows:

Public

1. Appalachian State University
2. Elizabeth City State University
3. Fayetteville State University
4. NC A&T State University
5. North Carolina Central University
6. Pembroke State University
7. UNC-Asheville
8. UNC-Charlotte
9. UNC-Wilmington
10. Western Carolina University
11. Winston-Salem State University

Private

1. Atlantic Christian College
2. Barber-Scotia College
3. Belmont Abbey College
4. Bennett College
5. Campbell University
6. Catawba College
7. Davidson College
8. Elon College
9. Gardner-Webb College
10. Greensboro College
11. Guilford College
12. High Point College
13. Johnson C. Smith University
14. Lenoir Rhyne College
15. Livingstone College
16. Mars Hill College
17. Meredith College
18. Methodist College
19. NC Wesleyan College
20. Pfeiffer College
21. Queens College
22. Sacred Heart College
23. St. Andrews College
24. St. Augustine's College
25. Salem College
26. Shaw University
27. Warren Wilson College
28. Wingate College

The total current funds expenditures and mandatory transfers for each of the institutions for the fiscal years 1971-72, 1973-74, 1975-76, 1977-78, 1979-80 and 1981-82 were obtained from Higher Education Information Survey (HEGIS) 2300-4 reports of the United States Department of Education. These expenditures were aggregated for public and private institutions and are presented in Table 1. Fall semester full-time equivalent (FTE) enrollments for 1971, 1973, 1975, 1977, 1979 and 1981 were obtained for each institution from various editions of the Statistical Abstract of Higher Education in North Carolina.

The Consumer Price Index for each fiscal year was obtained by finding the average of the two years involved. The resulting data are as follows:

	Consumer Price Index[8] (Yearly Average)		
1971	121.3		
1972	125.3	1971-72	123.3
1973	133.1		
1974	147.7	1973-74	140.4
1975	161.2		
1976	170.5	1975-76	165.9
1977	181.5		
1978	195.3	1977-78	188.4
1979	217.7		
1980	246.8	1979-80	232.3
1981	272.4		
1982	289.1	1981-82	280.8

Howard R. Bowen has suggested that when studying the expenditures of institutions with similar missions and student bodies, cost comparisons

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[8]Bureau of Labor Statistics, CPI Detailed Report.

should be in terms of units of services rendered.[9] Traditionally, the cost per unit is simply the cost of operating the institution for an academic year divided by the number of full-time equivalent (FTE) students enrolled during that year. This unit cost was computed for both the private and public institutions and is in Table 1.

Total current funds expenditures and mandatory transfers increased by $190 million or 211 percent for the public sector and by $117 million or 141 percent for the private sector from 1971 through 1982. Actually, much of this expansion was due to the 30 percent growth in the enrollment of the state's public and private comprehensive and liberal arts colleges and universities over the decade. The public university FTE enrollment increased by 13,758 students and the private by 3,978 students. When expenditures were adjusted for enrollment growth, the cost per student increased by $3,276 for the public schools and by $3,340 for the private. The public cost per student rose 119 percent or slightly more than the 110 percent increase of the private institutions over the ten-year period. However, throughout the decade the public institutions expended less per student than did the private sector.

The current funds expenditures and mandatory transfers were deflated using the Consumer Price Index and are presented in Table 2. In constant (1967) dollars the expenditures for public and private institutions increased 22 percent from 1971-72 through 1981-82, from $140 million to $171 million. The public institutions expanded by 37 percent and the private by 6 percent. These differences are largely a function of the disparity in growth rates of the public and private sectors during the decade.

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[9]Howard R. Bowen, The Costs of Higher Education (San Francisco: Jossey-Bass Publishers, 1980), p.5.

Table 1

CURRENT FUNDS EXPENDITURES IN CURRENT DOLLARS FOR NORTH CAROLINA'S PUBLIC AND PRIVATE COMPREHENSIVE AND LIBERAL ARTS COLLEGES AND UNIVERSITIES, 1971-1982[a]

	1971-72	1973-74	1975-76	1977-78	1979-80	1981-82
Total Current Funds Expenditures and Mandatory Transfers						
Public (N = 11)	$89,913,866	$115,678,724	$143,906,653	$184,375,661	$227,232,591	$279,773,675
Private (N = 28)	82,930,922[b]	92,083,777[b]	110,390,046[b]	132,961,470	164,692,449	199,828,833
Fall Semester Full-Time Equivalent (FTE) Enrollment						
Public (N = 11)	32,613	35,318	40,731	42,515	43,762	46,371
Private (N = 28)	27,417[b]	27,379[b]	27,454[b]	29,635	30,628	31,395
Total Current Funds Expenditures and Mandatory Transfers per FTE						
Public	$ 2,757	$ 3,275	$ 3,533	$ 4,337	$ 5,192	$ 6,033
Private	3,025	3,363	4,021	4,487	5,377	6,365

[a]Wake Forest and East Carolina Universities were not included because their medical schools inflate the financial data disproportionally.

[b]Wingate College is not included in this figure. Wingate became a four-year college in 1977.

Sources: Statistical Abstract of Higher Education in North Carolina, 1971-72,72-73, 73-74, 74-75, 75-76, 77-78, 79-80, 81-82. Higher Education General Information Survey (HEGIS) 2300-4 for 1975-76, 77-78, 79-80, 81-82.

Table 2

CURRENT FUNDS EXPENDITURES IN CONSTANT 1967 DOLLARS FOR NORTH CAROLINA'S PUBLIC AND PRIVATE COMPREHENSIVE AND LIBERAL ARTS COLLEGES AND UNIVERSITIES, 1971-1982[a]

	1971-72	1973-74	1975-76	1977-78	1979-80	1981-82
Total Current Funds Expenditures and Mandatory Transfers (constant 1967 dollars)						
Public (N = 11)	$72,922,843	$82,392,254	$86,743,010	$97,863,939	$97,818,593	$99,634,500
Private (N = 28)	67,259,466[b]	65,586,736[b]	66,540,112[b]	70,574,029	70,896,448	71,164,114
Total Current Funds Expenditures and Mandatory Transfers per FTE (constant 1967 dollars)						
Public	$ 2,236	$ 2,333	$ 2,130	$ 2,302	$ 2,235	$ 2,149
Private	2,453	2,396	2,424	2,381	2,315	2,267
Consumer Price Index	123.3	140.4	165.9	188.4	232.3	280.8

[a]Wake Forest and East Carolina Universities were not included because their medical schools inflate the financial data disproportionally.

[b]Wingate College is not included in this figure. Wingate became a four-year college in 1977.

Sources: Table 1 and Bureau of Labor Statistics.

When expenditures were adjusted for inflation and enrollment growth a quite different picture emerged. Whereas current dollar expenditures per student exhibited a steady and accelerating rise, the constant dollar costs remained relatively stable, even declining in some cases. The public per student costs decreased by 4 percent and the private per student costs declined by 8 percent. Although the private constant dollar per student expenditures decreased more over the decade, the public costs were still consistently lower than those of the private sector.

CONCLUSIONS

An examination of the current expenditures of North Carolina's public and private comprehensive and liberal arts colleges and universities over the past decade revealed the following:

1. The expenditures for the public institutions grew at an average annual rate of 19 percent as compared to 13 percent average increase for the private schools. Most of this growth was a result of expanding enrollments and inflated dollars. When adjustment is made for increasing enrollment growth by expressing expenditures in student units, the growth rate was 11 percent per annum for the public universities and 10 percent for the private sector. The current expenditures annual growth rate declined .4 percent for the public institutions and .7 percent for the private institutions when adjustments are made for enrollment growth and the decline in the value of the dollar over the decade.

2. Enrollment in the public institutions has increased more rapidly than that of the private, and the public institutions operated at a consistently lower cost per student than did their private counterparts.

Appendix A

The Classification of Institutions of Higher Education by the Carnegie Council on Policy Studies in Higher Education

1. Research Universities I. The 50 leading universities in terms of federal financial support of academic science provided they award at least 50 Ph.D.'s each year.

2. Research Universities II. The 100 leading universities in terms of federal financial support of academic science provided they award at least 50 Ph.D.'s each year.

3. Doctorate-Granting Universities I. These institutions award at least 40 Ph.D.'s in at least five fields per year or receive at least $3 million in total federal support each year.

4. Doctorate-Granting Universities II. These institutions award at least 20 Ph.D.'s without regard to field or 10 Ph.D.'s in at least three fields.

5. Comprehensive Universities and Colleges I. These institutions enroll at least 2,000 students and offer a liberal arts program and at least two professional programs.

6. Comprehensive Universities and Colleges II. These institutions enroll at least 1,500 students and offer a liberal arts program and at least one professional program.

7. Liberal Arts Colleges I. These colleges are highly selective in their admissions standards or are among the 200 leading baccalaureate-granting institutions in terms of numbers of their graduates later receiving Ph.D.'s.

8. Liberal Arts Colleges II. All liberal arts colleges which do not meet the Liberal Arts Colleges I requirements are included in this classification.

9. Two-Year Colleges.